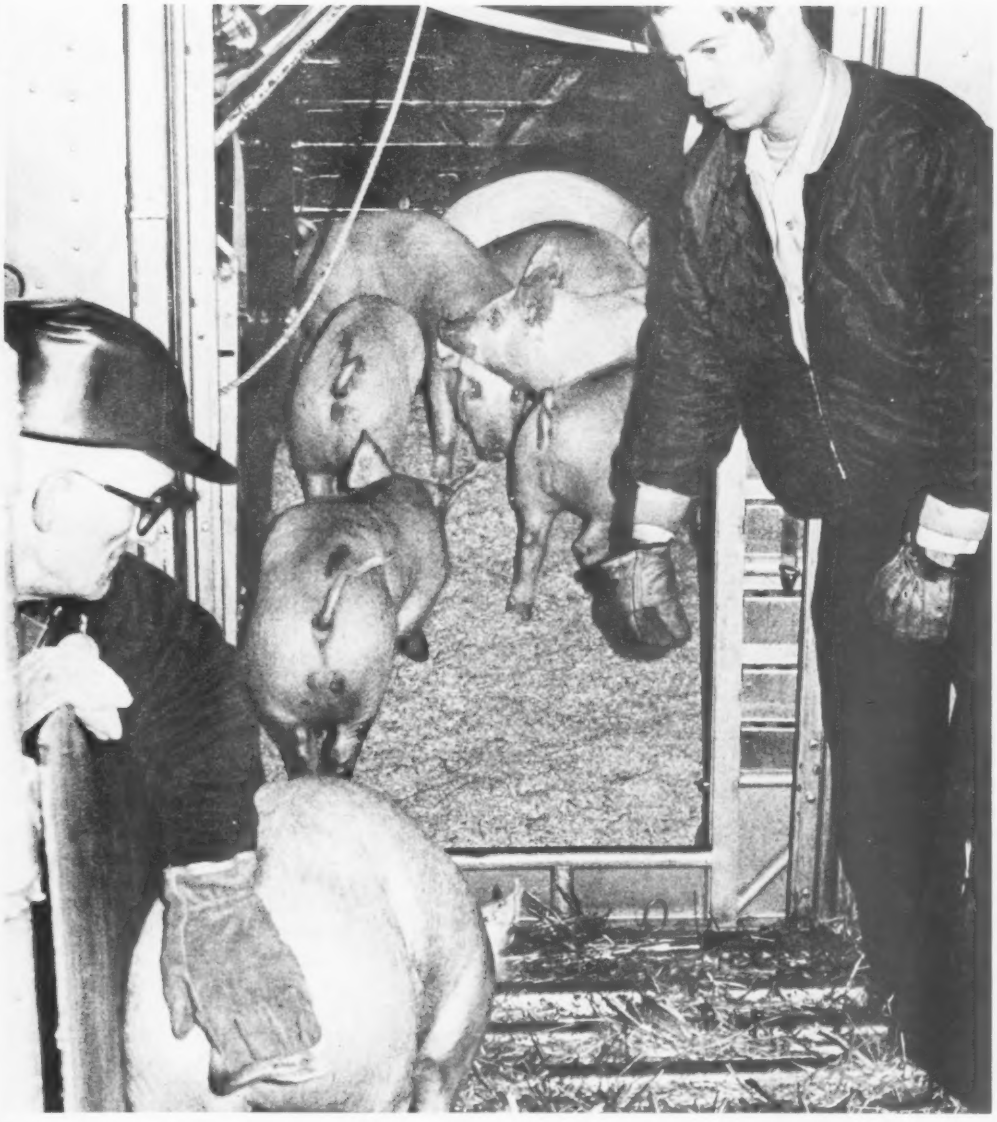
FOREIGN AGRICULTURE



Loading pigs for air shipment.

Soviet Sunflowers

U.S. Cattle Take to Air

October 27, 1975

Foreign
Agricultural
Service
U. S. DEPARTMENT
OF AGRICULTURE

FOREIGN AGRICULTURE
Vol. XIII • No. 43 • October 27, 1975

In this issue:

2 Soviet Sunflower Outlook Cloudy, U.S. Team Reports
By George E. Wanamaker
5 Philippine Cotton Use Prospects Seen "Good"
6 U.S. Cattle Take to Air as Foreign Demand Accelerates
9 Air Transport Seminar Tackles Environmental Problems
10 French Livestock Industry Expands Grain Feeding
By Ansel S. Wood
12 World Weather
13 Crops and Markets

This week's cover:

U.S. livestock handlers load pigs into an aluminum pen for air shipment to an overseas buyer. Articles beginning on page 6 trace the meteoric rise in air shipments of live animals and efforts being made to further improve this mode of export.

Earl L. Butz, Secretary of Agriculture

Richard E. Bell, Assistant Secretary for International Affairs and Commodity Programs

David L. Hume, Administrator, Foreign Agricultural Service

Editorial Staff:
Kay Owsley Patterson, Editor
Patricia O. MacPherson, Beverly J. Horsley, G. H. Baker, Marcellus P. Murphy, Isabel A. Smith, John C. Roney.

Advisory Board:
Richard A. Smith, Chairman; Gordon O. Fraser, William Horbaly, Richard M. Kennedy, J. Don Looper, Larry B. Marton, Arthur Mead, Brice K. Meeker, Jimmy D. Minyard, George S. Shanklin.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget through June 30, 1979. Yearly subscription rate: $34.35 domestic, $42.95 foreign; single copies 70 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Contents of this magazine may be reprinted freely. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or Foreign Agricultural Service.

Weather blamed

Soviet Sunflower Outlook Cloudy, U.S. Team Reports

By GEORGE E. WANAMAKER
Foreign Commodity Analysis, Oilseeds and Products
Foreign Agricultural Service

TOO MUCH SUN shone on Soviet sunflowers this summer, parching many fields so that even the sturdy sunflower plants withered and were abandoned by farmers or fed to livestock. A shortage of sunflowerseed has important implications for the Soviet Union, since these seeds furnish some three-fourths of the nation's edible vegetable oil and keep oilseed crushing mills operating at full steam—a top Soviet priority.

To assess Soviet production prospects, a U.S. sunflower-vegetable oil team visited main sunflower-growing areas of the southeastern USSR September 1-20, under the auspices of the U.S.-USSR agricultural agreement. They also reviewed Soviet oilseed processing techniques during visits to crushing facilities, margarine plants, and a mixed feed mill. Team members included the author, who was team leader; George W. Kromer, ERS; John Mogush, Cargill, Inc.; and Lars H. Wiedermann, Swift and Company.

In view of the high crop abandonment, team members concluded, the Soviets are likely to harvest only about 4.55 million hectares (11.2 million acres) of sunflowers this year—the lowest since the very poor showing of 1972. According to the Soviet Ministry of Agriculture, area sown to sunflowers in 1975 was over 4.763 million hectares

SOVIET SUNFLOWER AREA, YIELD PRODUCTION, AND PROCUREMENT

Year	Area	Yield	Production	Procurement	Procurement plan
	mil/ha	*qu/ha*	*mil. m.t.*	*mil. m.t.*	*mil. m.t.*
1970	4.8	12.8	6.1	4.613	4.613
1971	4.5	12.6	5.7	4.359	5.285
1972	4.4	11.4	5.0	3.753	5.410
1973	4.7	15.5	7.4	5.553	5.540
1974	4.7	14.4	6.8	5.226	5.690
1975	[1]4.55	[1]12.75	[1]5.5-6	[1]4-4.5	5.900

[1] Estimated.

PRODUCTION AND ESTIMATED DISTRIBUTION OF VEGETABLE OIL IN THE USSR, 1974
[In 1,000 metric tons]

Item	Production	Distribution			
		Food	Industrial (incl. soap)	Exports	Addition to stocks
State production:					
Sunflowerseed:					
Pre-press	1,748	1,348	200	—	200
Extracted	507	0	26	481	—
Total	2,255	1,348	226	481	200
Cottonseed	668	267	370	31	—
Other	178	[1] 68	[2] 110	—	—
Total	3,101	1,683	706	512	200
Other than State production	310	310	—	—	—
Total vegetable oil production	3,411	1,993	706	512	200

[1] Consists of such oils as mustardseed, corn, soybean, and peanut. [2] Consists of such industrial oils as linseed, castorbean, and tung.

(11.8 million acres).

If yields fall to 12.75 quintals per hectare—well under last year's 14.4—continued the analysts, total Soviet sunflowerseed output will likely fall within a range of 5.5-6 million tons, about a million below 1974's 6.76 million. In sharp contrast, the record harvest of 1973 totaled almost 7.4 million tons.

With the crop at this reduced level, the Soviets apparently will need to import soybeans, largely to fill the gap in edible oil needs and maintain protein cake and meal supplies. Imports of 1.5 million tons of soybeans are reportedly being considered for 1975/76 (September-August). According to the team's evaluation, soybean imports in 1975/76—and in years to come—will hinge on two factors.

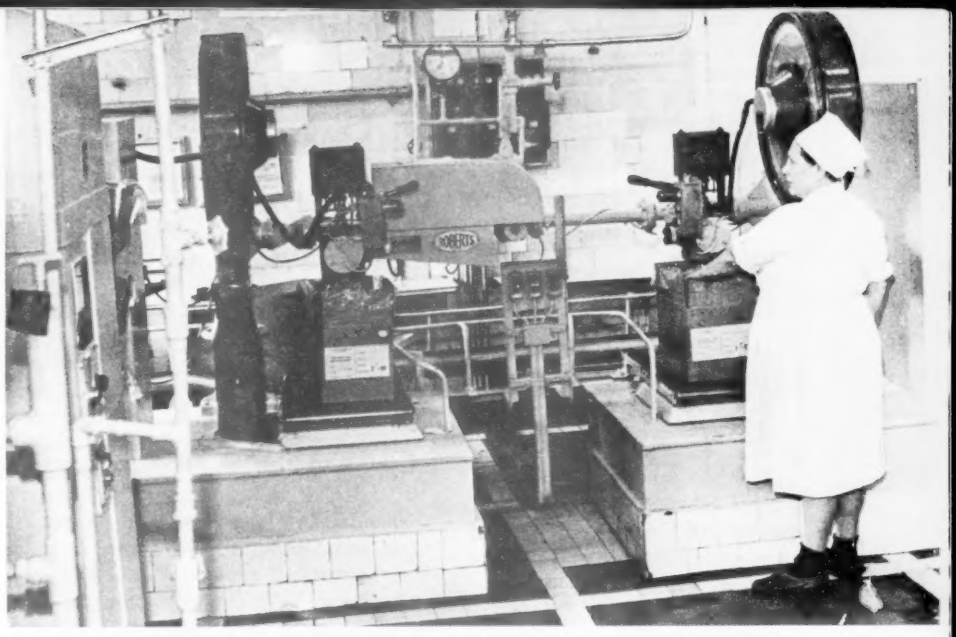
For one, Soviet seed processing facilities have excess capacity for crushing only about 500,000 tons of soybeans in normal crop years. Soybeans over this amount can be imported only when domestic sunflower or soybean crops are sharply reduced, as they were in 1964 and 1972 and apear to be this year. If the Soviets import 1.5 million tons of soybeans in 1975/76, for instance, 3 million tons of crushing capacity will be needed—suggesting that domestic crops are slightly lower even than the current estimate suggests.

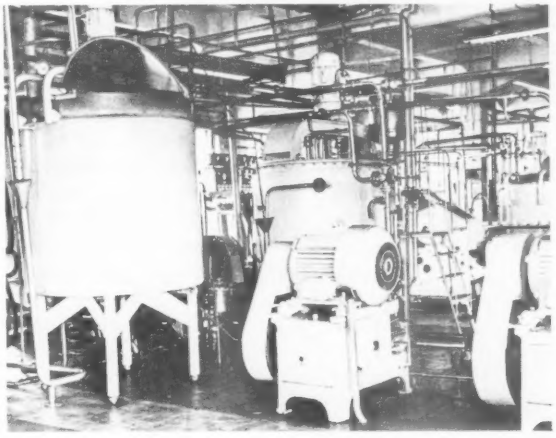
Secondly, soybean imports will continue to be favored over meal imports as long as the Soviets stress domestic processing, and their requirements for industrial oils exceed supplies. If needs for proteins for the mixed feed industry outpace domestic output, however, imports of oilseed meal or pellets may be initiated—a situation that could occur in the latter part of the 1976-80 plan period.

Team members observed sunflower production in selected areas of the Ukraine, Moldavia, and the Kuban, where crop conditions and conversations with local officials generally confirmed drought damage. Yet rainfall in these areas apparently had been higher than that in other major sunflower areas to the north and northeast. Ministries in Moscow provided additional information.

Region by region, the situation looked like this:

• In Moldavia—far western Province bordering Romania—the prolonged summer drought, coupled with reported moth damage, appeared to have reduced





Scenes inside a Soviet margarine production plant show bulk margarine filling line (above); churn area (left), with churn at left, votator pumps in foreground; refining department (below) with caustic proportioning and mixing equipment, right, centrifuges for separating and water washing, center, and control board, left.

sunflower yields up to 14 percent below 1974 levels. Harvested acreage could dip by 90,000 hectares (222,000 acres), according to local officials.

• In Odessa Oblast—southernmost area of the Ukraine bordering the Black Sea—sunflower area in 1975 is 200,000 hectares (494,000 acres) below 1974's, but is in line with historical levels. In 1974, acreage reportedly expanded to 400,000 hectares (988,000 acres), primarily on land where grain losses had been heavy.

• In several key sunflower areas, early planting and drought had advanced the 1975 harvest by as much as 2 weeks. Up to 5 percent of the early-harvested crop did not make seed and was harvested for silage. Harvesting difficulties were reported in the Don and Stavropol regions, and lower yields are forecast there.

The level of State procurement of seed is as important as sunflower production. For 1975, the State's procurement goal was 5.9 million tons. To induce collective farms to sell more than their procurement quotas, the State continues to offer incentive payments of 100 percent. To become eligible for the 100 percent bonus, collective farms must deliver quantities exceeding the average deliveries of the preceding 3 years. Sunflower is the only crop for which a 100 percent premium is paid; grain payments, for instance, total 50 percent.

The disposition of the Soviet sunflowerseed crop includes procurement, above-quota deliveries, feed, seed, waste, exports, use on collective farms for local milling, and consumption as seed. The Soviets, for example, eat roasted sunflower seeds much as peanuts are eaten elsewhere. In the final analysis, a sunflower crop of 5.75 million tons—midpoint of the 1975 crop estimate—may thus provide only 4.5 million tons of seed for State procurement and processing into oil.

The Soviet Union operates up to 180 sunflowerseed processing facilities, including 100 small rural mills. Processing capacity in the State sector has been estimated at 20,000 tons daily. On the basis of 316 operating days per year, this would total about 6.3 million tons per year. Based on expansion in the Soviet vegetable oil industry during the past decade, however, sunflowerseed processing capacity for 1975/76 probably now totals 6.5 million metric tons.

The team toured the processing plant

Continued on page 12

SOVIET VEGETABLE OIL OUTPUT HEADS FOR A DECLINE IN 1975/76

Reflecting the disappointing sunflowerseed harvest, vegetable oil production in the Soviet Union in 1975/76 — September-August crush year — is likely to be well below last year's, although crushing of imported oilseeds may prevent output from dipping too sharply.

To help fill the production gap, the Soviets have apparently begun purchasing soybeans. A probable 500,000-ton sale of Brazilian beans was reported on September 22, and rumors of an additional 500,000-1 million-ton purchase continue to circulate. The U.S. moratorium on grain sales to the USSR, which began in mid-August 1975, include soybeans.

Latest USDA estimates show the 1975 Soviet sunflowerseed crop at about 5.5-6 million metric tons, sharply below the 6.8 million harvested in 1974. Production of other oilseeds, including cottonseed—concurrently expected to more than equal last year's output—is unlikely to make up the shortfall.

In the 1974/75 crush year, the Soviets produced almost 3 million tons of oil from Government oilseed holdings—about 120,000 tons below 1973/74's record 3.1 million. Some 300,000 tons of oil are also processed annually from non-Government holdings.

A wide variety of products are used for vegetable oil production in the Soviet Union, as illustrated by recently released 1974 figures. Although sunflowerseed and cottonseed dominate production, other products —including peanuts, castorbeans, tung nuts, and occasionally soybeans —are also used, as are imported oilseeds. In 1975/76, for instance, soybean imports may play a particularly important role in vegetable oil production.

The prospective imports probably will not greatly affect vegetable oil production in calendar 1975, however, since the year is already three-fourths completed. Thus, oil output in calendar 1975 should about reach the 3-million-ton level of the 1974/75 crush year. Calendar 1974 was generally a good year for production of the various types of vegetable oils, with most exceeding the goals set in the annual plan.

—By Judy Goldich, ERS

USSR VEGETABLE OIL PRODUCTION
[In 1,000 metric tons]

Year	Production
1970/71	2,615
1971/72	2,530
1972/73	2,320
1973/74	3,102
1974/75	2,982

USSR VEGETABLE OIL PRODUCTION BY TYPE OF OIL, 1974

Kind of oil	1974 production	1974 plan	Plan fulfillment
	1,000 m.t.	*1,000 m.t.*	*Percent*
Sunflowerseed	2,255.0	2,224.4	101
Cottonseed	668.2	658.9	101
Linseed	39.3	37.4	105
Castorbean	33.2	32.4	103
Mustardseed	28.8	27.0	107
Corn	11.0	11.7	94
Soybean	26.5	26.0	102
Peanut	.6	1.4	43
Tung	.4	.3	112
Fruit, grape, and tomato seed	.7	.6	112
Other	37.1	35.5	105
Total	3,100.7	3.055.5	101

Source: *Maslo-zhirovaya promyshlennost,* May 1975.

Philippine Cotton Use Prospects Seen "Good"

PROSPECTS for cotton consumption in the Philippines during 1975/76 are good. Consumption is expected to increase by about 18 percent to 36,000 metric tons, compared with 30,559 tons in 1974/75—a projection based on the fairly stable growth rate of the Philippine economy, a slowdown in the inflation rate, and improved export demand for Philippine textiles.

Philippine imports of raw cotton—practically all from the United States—in 1975/76 should recover to about 37,843 tons, a strong 62 percent greater than the 23,376 tons imported in 1974/75. The expected recovery in the level of imports is a result of improved domestic and export demand, and rebuilding of depleted cotton stocks.

The outlook for cotton imports and consumption in the 1976/77 marketing year is for about the same performance as that projected for 1975/76.

Philippine cotton production is not significant. An experimental cotton crop was produced in 1974/75 under a contract let by the Philippine Cotton Corporation (PCC). The crop amounted to 365 bales (480 lb net) from 479 acres for an average lint yield of about 365 pounds per acre or about three-fourths of a bale per acre.

"...there is continued strong demand for cotton for use in 100 percent cotton denim, chambray, and corduroy, as well as for traditional blends."

The cotton was planted in November 1974 and harvested in late March-April 1975. A large part of the current production is being used for experimental purposes. PCC may contract for another experimental planting of 1,000 hectares in 1976.

A significant quantity of U.S. cotton arrived in the Philippines in July and is expected to clear customs during the 1975/76 crop year. These imports are in part a response to the Presidential decree of July 21 suspending the 10 percent customs duty on raw cotton.

Imported polyester and rayon currently are cheaper than the cotton Philippine mills had been buying under old contracts by as much as 10 U.S. cents per pound, but there is a continued strong demand for cotton for use in 100 percent cotton denim, chambray, and corduroy, as well as for traditional popular blends.

A resurgence in mill orders beginning in April enabled mills to return to a full workweek by June. Earlier in the year, many mills had been operating on a 4-day workweek. Currently, export demand appears to be strong, but shipments in calendar 1975 probably will not show an increase over those of calendar 1974 because of poor export performance in first-half 1975. Philippine textile exports in calendar 1974 amounted to $20.1 million, and exports in the first 6 months of 1975 were valued at $8 million.

The outlook for cotton consumption in the current year is for considerable improvement, although it is not expected to equal the record level of 37,727 tons of 1973/74. Consumption in 1975/76 is estimated at 36,000 tons.

The Philippine gross national product probably will continue to show a real growth rate of about 5 percent, and the rapid rate of inflation that dominated the 1974 economic picture appears to have been checked.

These factors, plus some improvement in personal income, suggest that consumers will be able to replace worn items that normally would have been replaced earlier. Mills report a backlog of export orders. Mill stocks at midyear were only 3,157 tons—an exceptionally low level.

Current world cotton prices are not as meaningful to the Philippines' market as they would be under normal marketing conditions. The major Philippine spinning mills are now taking delivery of a backlog of past-due contracts at f.o.b. prices that average well above 60 U.S. cents per pound.

Two or three mills will absorb a major portion of this high-priced cotton and will not need to buy again for some time. Other mills, however, will quickly consume the relatively small amounts of high-priced cotton. Some are already placing orders under new contracts.

Cotton currently being purchased by Philippine mills is priced f.o.b. from 44 U.S. cents per pound for 15/16-inch SLM to 52 cents for 1-1/16-inch M. There are occasional small f.o.b. purchases of light-spotted cotton, mostly in short-length fibers at prices below 40 cents per pound. The freight rate of cotton from U.S. west coast ports to Manila is about 6 U.S. cents per pound, and rates from Gulf ports, less stable, range from 5.5 to 7 U.S. cents per pound.

"...outlook for cotton consumption...is for considerable improvement, although it is not expected to equal the record level of 1973/74."

Philippine mills at the beginning of the 1974/75 year had available financial resources amounting to $20 million in CCC credit and $29 million from a Central Bank foreign exchange allocation for use in purchasing cotton. In May, an additional $10 million CCC credit was established.

As of mid-September, Philippine mills had used about $25 million in CCC credit and $7-$9 million of the $29 million foreign exchange allocation. The Government has not granted a new foreign exchange allocation for cotton purchases during the past year. The remaining $5 million CCC credit and $20 million exchange allocation will soon be depleted.

In May, the Philippine National Bank made available about $2.7 million in inventory loans for textile mills, but this amount is viewed as insignificant in view if the magnitude of financing that is needed. Cotton import loans made under this program will be deducted from the foreign exchange allocation granted by the Central Bank.

A 7-percent advance sales tax is levied on 125 percent of the landed cost of raw cotton.

—Based on report from
U.S. Agricultural Attaché
Manila

U.S. Cattle Take to Air as Foreign Demand Accelerates

As THE DC-8 braked to a stop at Harrisburg International Airport, attendants moved in to prepare it for the flight to Paris. They lowered and tested the ramp, quickly spread wood shavings on the removable flooring, and readied the 10 cattle compartments. Some 30 minutes later, two trucks drove up, backed to the ramp, and began loading 62 Holstein-Friesian bulls for the 8-hour flight to Charles De Gaulle Airport.

Thus began a typical overseas export of U.S. cattle, which increasingly are taking the air route to foreign markets. In fact, from an experimental technique in the 1950's, air shipment of cattle has grown to the point where some 80 percent of the cattle moving outside North America go by air. (Mexico and Canada—leading markets—still receive their imports largely by land transport and on the hoof.)

The marriage of air transportation and cattle exports reflects almost revolutionary changes in both transportation means and foreign livestock industries.

In the first instance, larger and faster planes, adaptability to a variety of cargos, improved handling and environmental conditions, and competitive pricing account for the sudden ascendance of the air share of cattle and other live animal exports—horses, hogs, sheep, and poultry. The lack of U.S.-flag ships designed for livestock transport; the considerable time, usually 2 weeks or more; and higher losses associated with sea voyages have served to accelerate this shift to air shipping.

In the second case, a growing demand for high-protein food has sparked livestock expansion worldwide, and with it imports of U.S. breeding and feeder cattle to use in herd improvement and enlargement. Such imports have been furthered by the often-intense interest of foreign governments in expanding their national livestock industries and consequent willingness to lend financial assistance to cattle importers.

Many of these foreign buyers are switching to specialized beef and dairy breeds after having depended almost entirely on dual-purposes animals for both meat and milk at the expense of yield and product quality.

Others in the tropics—or other areas of extreme climate—are purchasing from the United States because here they can find the special breed characteristic desired. For instance, U.S. Brahmans and Santa Gertrudis are popular in the tropics owing to their adaptability to hot, humid climates.

These developments in concert have vastly extended the horizons of the U.S. cattle market. Where once it was the rare shipment that went beyond Latin America—or Western Europe at the most—now the market is truly international. In fact, some of the biggest cattle markets today are distant, often landlocked countries, making for a tedious several-weeks' journey by ship, plus rail or truck, but a trip of less than 24 hours by air.

USDA inspection certificates reveal the wide scope of this foreign market. In fiscal 1975, a record 24,203 cattle were inspected for export to nearly 50 countries outside North America—an estimated 80 percent by air. (Trade figures are not broken down according to transportation means, but estimates—usually ranging from 70 to 90 percent, depending on the source—have been made of the percentage moving by air.) This total compares with 22,533 head shipped in fiscal 1974 and the previous record of 23,952 in fiscal 1973. Only 11,743 head were shipped in fiscal 1972.

Following huge purchases of 3,924 head in fiscal 1974, Hungary again made heavy imports in fiscal 1975—3,289 head—to rank as the single largest market. Iran—a market likely to buy breeding cattle for some time to come in light of its ambitious livestock expansion plans—followed with 2,729 head, while Ecuador, Argentina, and Peru were other top purchasers.

AIRCRAFT industry figures, in terms of tonnages, further reveal the rapid growth in cattle shipments. These figures show that air shipments in calendar 1974 hit 6,165 tons out of a total of 9,804 tons for all live animals. This compares with an alltime high of 6,920 tons in 1973, 3,895 tons in 1972, and only 1,751 in 1967.

Like air technology generally, air shipping of cattle has a short history. It began with small-scale flights to nearby Latin American countries in the 1950's, reached the rapid take-off point in the 1960's, and gained dominance of overseas traffic in the 1970's. Here are some highlights of this trade during the last decade:

- During 1964 and 1965, some 18,000 baby veal calves were airlifted from the United States to Italy in a landmark effort launched to overcome a critical Italian meat shortage. Because this was the first attempt to airlift baby calves, it required the development of special wirebound wood crates for shipping the animals. Such crates were lightweight and low in cost but had slats that could be broken by animals other than calves and resulted in some incidences of death and exhaustion. Despite the problems, the airlift paved the way for dramatic improvements in transportation methods and further growth in air traffic.

AT THE SAME time, regular air shipments were being made to other regions. Foremost of these was Latin America, where such countries as Peru, Colombia, Ecuador, and El Salvador were importing U.S. beef and dairy cattle to improve and expand their herds.

- In the late 1960's, Chile entered the market for 12,000 head of U.S. Polled Herefords, setting the stage for the first major airlift of larger animals. With assistance from USDA scientists, a walk-on, walk-off pen system was developed by a leading U.S. air carrier for the ultimate air shipment of 9,000 head of Polled Hereford cattle to Chile. Virtually all were destined for the southern Province of Magallanes, where diversification was underway in a livestock industry previously centered around sheep.

By then, scores of other countries also were receiving U.S. cattle by air, as evidenced in fiscal 1968 data showing overseas exports of 23,013 animals, 15,960 of them cattle going to 38 countries, and a majority of them being shipped by air.

- By the early 1970's, countries in the most distant part of the world had been added to the growing number of markets for U.S. cattle, further increasing the importance of air ship-

ments of live animals.

In Asia, Taiwan was airlifting Herefords, Santa Gertrudis, Charolais, and Holstein-Friesian cattle for its livestock improvement program. Japan was receiving sizable numbers of Herefords. Taiwan was buying Brahmans. Malaysia imported several planeloads of Santa Gertrudis and Brahman cattle. And Korea was importing Holstein-Friesians to upgrade dairy herds, using the resulting bull calves in its emerging feedlot operations.

At the same time, Hungary, Bulgaria, and Yugoslavia began massive airlifts of Holstein-Friesian cattle for their burgeoning dairy industries.

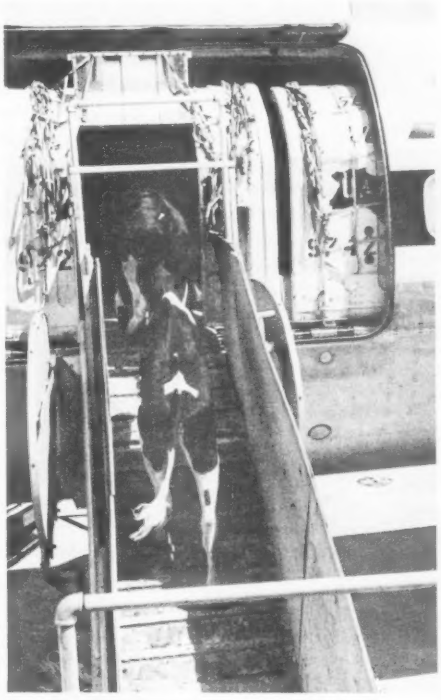
• Following the oil embargo of 1973 and the subsequent surge in petroleum prices, several oil-rich nations of the Mideast began almost overnight improvement in their livestock industries.

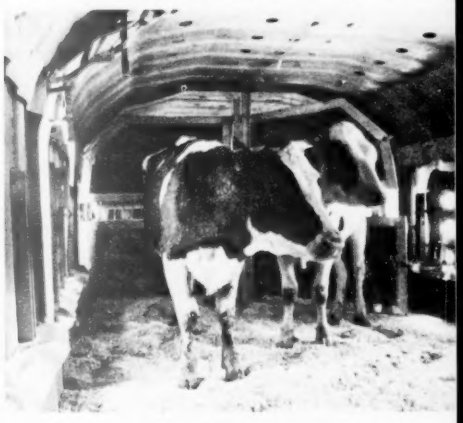
Among these nations was Iran, which soon entered the market for huge numbers of U.S. Holstein-Friesians. These recently have been moving in at the rate of several planeloads a week and will eventually number many thousands of head as evidenced by the import of over 2,700 head in fiscal 1975.

Meanwhile, the pace has picked up for shipments to other markets, such as Thailand, which has bought 600 head of U.S. Brahmans in the last year as part of a program to import 1,200 head of beef cattle.

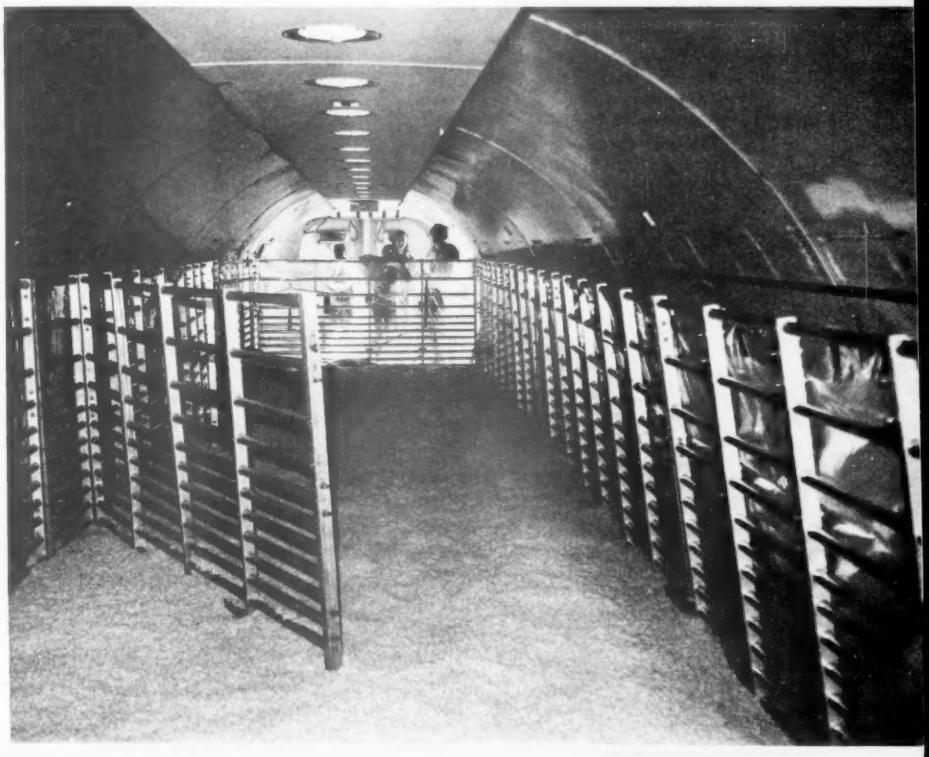
Such developments have made internationalists out of cattlemen and breed associations that a few years ago looked no farther than Canada and Mexico for foreign markets. For instance, Holstein-Friesian Services—the largest single air shipper of cattle today—was created as an export-oriented offshoot of the Holstein-Friesian Association of America when it became apparent that sales opportunities were developing overseas.

THE ASSOCIATION took its first plunge into the market on June 23, 1970. with an air shipment of 65 Holstein-Friesians—40 bulls and 25 bred heifers —from Stewart Air Force Base, Newburg, New York, to Athens, Greece. Since then, its air shipments have grown to nearly 1,000 cattle a month or the equivalent of over three planeloads a week, stairstepping up from 1,799 cattle shipped in 1971 to 2,356 in 1972, 7,495 in 1973, 8,500 in 1974, and 5,500 through the first 6 months of 1975. (These figures include small numbers of other cattle—Herefords, Angus,





Clockwise from top: Santa Gertrudis cattle in holding pens await air shipment to the Far East; Holstein-Friesians in one type of air-cargo penning system that uses igloo-shaped fiberglass-sided containers; interior of another system using gates to separate animals; young Holstein-Friesians enter a "jet barn" via a ramp especially designed for animal loading.



Brown Swiss, Jersey, etc.—exported through Holstein-Friesian Services.)

In addition to Holstein-Friesian Services, seven other cattle associations are active in the export of live animals. Four of these—American Hereford Assoc., American Brahman Breeders Assoc., Santa Gertrudis Breeders, Intl., and American Angus Assoc.—are regularly involved in air shipping cattle to foreign markets outside North America.

Today, the most common way of shipping these cattle and other live animals is in DC-8-63 ("stretched") aircraft that either has been converted into a barnlike environment with stalls or pens, or has been equipped to carry special palletized wire-sided crates. (For larger animals, the former method has proved more practical and now is used almost exclusively.)

A stretched DC-8 can carry about 75,000 to 100,000 pounds, which varies according to the destination and distances flown. This averages out to about 85 to 90 1,000-pound animals. Flying time ranges from 10 hours logged for some West European markets to 24 hours for markets half way around the world, such as the Philippines.

Smaller jets also have been used, as well as propeller flights to nearby Western Hemisphere destinations, since shipment volume often is relatively small, many airstrips there are not long enough to handle jets, and inadequate night lighting often necessitates daytime landings. During the first 7 months of 1975, there were 223 propeller flights —generally equipped with livestock systems similar to those of the stretched DC-8's—to Central and South American countries.

ON THE OTHER hand, the air carriers are now preparing to introduce larger planes into the livestock air-shipping business. One carrier is planning to start using DC-10's beginning next year, while two others are introducing the giant 747's into their fleets.

Most of the jets in use for animal transport have barnlike interiors divided into pens or stalls. In addition, these compartments can generally be doubled-decked for small animals.

To separate the animls, air carriers use two standard penning systems. One consists of a series of igloo-shaped containers, or stalls, with fiberglass sides and airvents. One is a metal gating system that divides the interior into pens (common pen sizes are 7½ x 10 feet and 10 x 15 feet). Pallet floors are covered with removable cardboard or combinations of plastic sheeting, tar paper, and other substances, plus celotex, wood shavings, or other moisture-absorbing materials.

Specially designed ramps allow for easy movement of animals from the truck or ground to plane.

A final and critical provision is the ventilation system, which usually includes ground air-conditioning units and exhaust fans for use during loading, and on-board air conditioning and ventilation.

Early experiences with air shipments had pointed up major weaknesses in this area, as poorly designed containers,

Continued on page 16

Many Preliminaries Mark Cattle Shipment

BECAUSE of the nature of the product—live, often testy, potential disease-carrying animals—air shipping of cattle is a long, complicated procedure in which the actual flight is literally an anticlimax, described by some as the easiest part of the entire export operation. Take, for example, a shipment earlier this year of young Holstein-Friesian bulls from Harrisburg, Pa., to Paris, France.

The animals on this particular flight had been carefully selected for artificial insemination stud units of four French buyers. As purebred Holsteins—a tall, angular breed noted for some of the world's highest milk yields—the bulls will aid in France's continuing effort to upgrade its dairy herds, while also allowing France to enhance its position, in competition with the United States, as an exporter of breeding cattle.

Like the United States and most other major livestock producers, France strictly regulates live animal imports via quarantines, vaccinations for certain diseases, and other precautions against entry of foreign diseases, which can devastate vulnerable livestock industries. The bulls were subject to these restrictions, plus routine U.S. export requirements. In addition, the buyers—wanting to protect their investment of around $3,600 per animal, on the farm—threw in such added stipulations as the requirement that no other animals accompany the bulls in flight.

Hence, the import process was predestined to be long and involved, taking in fact, about 3 months from start to finish.

As an initial step, the buyers supplied specifications to the Holstein-Friesian Services, Inc., which then arranged for a group of "coordinators" to go from farm to farm to select suitable animals—in this case, ranging as far west as California and as far north as Wisconsin. They selected a number of bulls meeting health and semen-suitability tests and other requirements and forwarded a list of these animals to the buyers. The buyers followed up by sending four teams to the United States to examine several hundred animals, from which they selected 62 for actual shipment.

The choice thus made, arrangements were made with an airline for a charter flight, ground handlers were contacted to take care of land transportation, and the animals were put into 45-day quarantine in various facilities in their States of origin—California, Wisconsin, and Pennsylvania. Here they were carefully observed for development of diseases and other health problems.

At the end of quarantine, the bulls were loaded into trucks that had been inspected under supervision of a U.S. Government veterinarian for disease, steamed, disinfected, and then sealed shut. In this way, they spent 20-40 hours on the road en route to the Farm Show Building in Harrisburg, for a final few days of quarantine and some generous care and feeding.

The last leg of the journey on American soil was by truck from the Farm Show Building to Harrisburg International Airport, for boarding the "stretched" DC-8 destined for Paris. Four hours later they were in flight, and some 8 hours after that, unloaded at Charles De Gaulle Airport, Paris, where once again they would go through the quarantine routine to meet additional precautions against entry of a "foreign" disease. Such is the life of the bovine traveler.

Air Transport Seminar Tackles Environmental Problems

THEY CAME from industry and Government—from the aircraft manufacturers, carriers, and related industries; humane societies; and the ranks of Government veterinarians, engineers, research scientists, and regulatory officials—to debate the perennial question of how to deliver a better product. But in this case debate focused not on conditions of mere inanimate products, but on the safety and humane aspects of currently booming air shipments of live animals.

The scene was an October 7-8 Livestock Air Transport Seminar. Sponsored jointly by USDA's Foreign Agricultural Service (FAS), Agricultural Research Service (ARS), and Animal and Plant Health Inspection Service (APHIS), the seminar was held at the National Agricultural Library, Beltsville, Md.

Here, some 110 seminar participants looked into how livestock—cattle, horses, swine, sheep, goats—are affected by humidity, temperature, ventilation, noise, and other conditions on aircrafts and into economically feasible ways of improving conditions.

One immediate result of the seminar was formation by industry representatives of an informal committee to investigate the feasibility of a livestock air export association or some other continuing effort to maintain communications among groups interested in livestock air shipments. The 15-member committee scheduled a meeting in Houston, Tex., December 10-11.

The builders and operators of aircraft are now in the midst of an expansion program to handle business resulting from a growing foreign demand for live animals. APHIS veterinarian inspection certificates show 35,832 animals certified for export in fiscal 1975 to 42 countries with the majority of them shipped by air carriers.

Seminar keynoter was Dr. Pierre Chaloux, Deputy Administrator of APHIS, who pointed out that ignorance and carelessness are basic reasons for the inhumane treatment of animals. He added that solutions to such problems often can be worked out by cooperation, rather than regulation.

The importance of good research in finding answers to air-transportation problems was stressesd by Dr. T. Kenny, Assistant Administrator of ARS, who also reported on ARS activities that have already improved handling and transport of animals.

Tom Poerstel, Export Trade Services Division, FAS, defined the seminar's objective as trying to develop better, easily understood, guidelines so that animals beginning a trip in good condition "will be delivered in that same good condition at final destination." He also questioned whether carriers and handling facilities can keep up with the demand, citing an expected 10 percent yearly expansion in overseas shipments of dairy cattle between now and 1980. Large imports by the Mideast and Eastern Europe are seen as major forces behind this growth.

ONE AIRCRAFT manufacturing official was more cautious in his appraisal of future demands but agreed that live animal shipments are getting a bigger share of total airplane use, with such shipments in the peak year of 1973 hitting 12,000 tons out of a total tonnage of 681,000. His estimates put the airlines' share of live animal shipments at around 70 percent.

Another representative reported that —in the face of a scarcity of information on how airplanes affect animals— his company is developing an environmental recorder. This will measure temperature, humidity, CO_2 levels, and other vital factors of animals during shipment.

Representatives of three major air carriers described innovations already being used by their groups to enhance air shipping of live animals.

One official reported that his company will have three of the giant wide-bodied jets shipping livestock by the end of next year and is now working on modifications to be used in the aircraft, such as systems for triple-decking of animals and ones that will allow shipment of livestock and dry cargo on the same carrier.

A second carrier representative alluded to the rising costs of shipping animals brought by soaring fuel costs, which have upped the minimum return needed to $6.35 a mile from $4.50 a few years ago—a cost that is seen going to $7.50 by 1980. This carrier will begin using the "wide bodies" in December of this year.

Innovations such as a lightweight 2,500-pound livestock penning system and a ventilation system that allows circulation of the coolest air in the middle of a pen were discussed by a third airline representative. This carrier also will be introducing larger planes soon.

The fitters of aircraft equipment and ground service operators reported on activities and needs in their spheres, including the need for proper equipment for the different types of animals being prepared for air shipment. The importance of efficient, comfortable holding facilities for animals prior to shipment was emphasized by the representative of a newly established livestock inspection facility at New Iberia, La., and a humane society official stressed his organization's interest in research specifics regarding proper treatment of animals.

Among these and other speakers was a general consensus that shipping conditions have improved considerably over the years. However, there also was consensus of a need for even better environmental conditions, not only for humane reasons but also because of the economic advantages of delivering healthy animals.

DISCUSSIONS by three working groups focusing on aircraft, containers and other equipment, and ground handling facilities pinpointed a number of needs, including:

- Profiles of aircrafts used for transporting live animals;
- A data center for assembling and disseminating air shipment records;
- Evaluation of loading and unloading equipment;
- Evaluation of the different types of protective covering for floors of aircraft and ground transportation equipment;
- In-depth studies of containers versus open penning systems for transporting animals;
- Research into optimum numbers of animals that can be transported;
- Development of regional laboratories for testing export animals;
- Improved temperature and humidity control.

—By BEVERLY J. HORSLEY

French Livestock Industry Expands Grain Feeding

By ANSEL S. WOOD
Commodity Analysis, Grain and Feed
Foreign Agricultural Service

FRANCE is pouring an increasing amount of its grain into livestock feeding—in both on-the-farm and commercial feed operations.

Although France is the European Community's top livestock producer, it uses less commercially mixed feed per unit of livestock product than any other EC country except Italy. France's abundance of forage production and, more importantly, its large production of grains and consequent heavy on-farm feed mixing have combined to provide strong competition for commercially mixed feed.

But the French livestock industry is modernizing, and, with the improved production practices, livestock feeding has expanded rapidly in recent years. Most French feedgrains are now mixed into balanced rations, either by the livestock grower or by a feed manufacturer. With the expansion in livestock feeding, France's commercial feed industry has tripled its output over the past decade, hitting 11 million tons in 1973/74.

In 1973, France harvested 42.1 million tons of cereals, and fed 16.8 million tons of that amount to livestock. Grains account for about 45 percent of the ingredients of a concentrate feed mixture, and milling offals for another 12 percent, indicating the dominant role of grains in animal feeding. The volume of grains consumed by French livestock has risen by a third in the past decade.

While once considered the bread basket of Western Europe—thanks to its large production of grains for human consumption—France today may more appropriately be called the "Iowa" of Western Europe, since it channels so much of its grain output into livestock production.

In 1972/73, French farmers fed about 10 million tons of their own grains, and about 1.2 million tons of grains purchased off-the-farm. At the same time, the mixed feed industry utilized 5 million tons of cereals, plus 500,000 tons of milling byproducts.

While on-farm consumption of grains has remained fairly constant, grain use by the mixed feed industry has gained quite rapidly, as have consumption of livestock products and improvements in methods of livestock raising. Grain utilization by the feed manufacturers more than doubled between 1962/63 and 1972/73.

By 1972/73, the output of mixed feed plants in France had grown to three times that of 1962/63, with 72 percent of the gain occurring in the last quarter of the decade. Total production reached nearly 10 million tons in 1972/73, and the 11-million-ton high in 1973/74.

Commercial feed for cattle rose 18 percent in 1972/73, compared with a 14 percent growth rate for the entire feed industry. At 2.25 million tons, cattle feed accounted for 22 percent of all manufactured feed that year.

OUTPUT OF FEED for dairy cows was 1 million tons; for calves, 700,000; and for other cattle, 550,000 tons. But commercial mixtures are fed to a mere 5 percent of France's dairy cows, and to only 30 percent of the cattle produced for beef.

Though the amount of feed manufactured for cattle rose 150 percent between 1963 and 1973—a time when cattle numbers grew 11 percent—most feed for cattle is still mixed on the farm.

Mixed feeds for swine have accounted for a large share of the feed industry's recent growth. Swine feeds shot up to 3.8 million tons in 1972/73 from 1.7 million tons in 1962/63—a 124 percent gain—during a period when swine numbers grew only 23 percent.

Swine feed output mounted 11 percent in 1972/73 to constitute 37 percent of total feed production. Half the hogs in France are now raised on commercial feeds.

Production of mixed feed for poultry rose 12.5 percent in 1972/73 to 3.5 million tons, 34 percent of total feed output and double the 1962/63 poultry feed output. Mixed feeds are used more widely by raisers of poultry than any other livestock—covering 60 percent of all French laying hens and 70 percent of broilers and other fowl in 1972/73.

Production structure. In 1973, there were 958 mixed feed manufacturers in France. Eighteen of these produced over 100,000 tons each, 39 percent of the national total.

FRENCH LIVESTOCK production used to be characterized by a large number of producers, most of whom had limited understanding of technology, economics, and the problems in marketing their products. To change this, mixed feed manufacturers are providing assistance in management and economic know-how, and in processing and marketing.

The mixed feed industry has integrated large sectors of livestock production, contracting with producers to furnish feed and then buying their output. Eight-five percent of broilers are now produced under integration, as are 40 percent of both eggs and swine.

In 1973, 73 percent of French mixed feed production was controlled by private companies and 27 percent by cooperatives.

Under the management of the 810 **private companies** there are 878 feed mills. Thirteen companies produce above 100,000 tons, operate 77 factories, and produce 40 percent of the output of all private companies.

There are in general three categories of private concerns:

- Service firms. These provide service to small manufacturers through assistance in formulation of rations, in technical advice and management, and in supplying mixtures containing minerals, vitamins, and other essential elements. The client feed mixer, in turn, produces feeds only under the brand name of the service company.

While the majority of service firms mix some feeds themselves, most of the output under their names is produced by their client concessionaires. The type of relationship between the service firm and the individual client varies. The latter may be a capital affiliate of

Partial source of information for this article is *Le Producteur Agricole Francais*, January 1975.

the service firm or an independent company receiving only technical assistance from the service firm.

- Independent firms. These companies perform all operations themselves. They produce their own micro-mixes, plan formulas, perform research, operate a number of factories, and merchandise their own product. Some of these firms have service-firm-type contracts with a few independent companies to produce feeds for them.
- Associated producers. These are the firms associated with, and producing under, the trademark of the service firms. They constitute a majority of all the feed fabricators in the country.

Foreign investment in French feed firms has become more and more common. About half the mixed feed production comes from companies in which foreign firms have majority interest.

The French feed manufacturing industry operates relatively independently of the suppliers of its ingredients, though some inland firms utilize their own materials. One leading firm, for instance, uses its own soybean meal, a byproduct of oil extraction, and another utilizes its own milling offals.

In 1973, 148 **cooperatives** shared nearly 3 million tons of mixed feed production, 27 percent of French output. Two-thirds of the cooperative operations have been combined under two large unions, which perform the function of service firms to their member cooperatives.

One important cooperative, Unicopa, has remained independent and produces about an eighth of total cooperative output. A few cooperatives produce and retail under the trademark of service firms.

While none of the cooperators ranks in production with the leading private firms, cooperative mills are generally larger and their average output is higher than that of the private. Most of the cooperative feed mills also sell farm supplies and provide grain storage.

Zones of production. The most outstanding region in development of the mixed feed industry in France is Brittany. In 1972/73 it produced 28 percent of the total, about 3 million tons, with an increase of 25 percent in that year. Pays de la Loire manufactured 1.2 million tons, up 18 percent. Other heavy producing areas are Haute Normandie, the Nord, and the Rhône-Alpes. Areas of less importance are Limousin, Franche-Comte, and Alsace.

Grazing is giving way to feeding in France's livestock trade. Brune des Alpes *cows still wander around mountain dairy farms, left, but cows are fed at more modern operations like the dairy co-op, below.*

France's 11 million tons in 1973/74 led the European Community in mixed feed output for the first time. West Germany followed with 10.8 million tons, the Netherlands with 10.5 million, and the United Kingdom with 10.3 million (down from a record 11.2 million in 1972/73).

The French mixed feed industry has a lot of room for growth, compared with those of other countries, because of its low ratio of consumption of commercially mixed feed to its large output of livestock products.

The low ratio is because France's long pasture season and abundance of forage crops limit dependence on concentrate feeds. Also, livestock raisers generally find it is more economical to process France's plentiful homegrown grains on the farm than to sell them and then buy commercial feeds.

In grain-importing countries, on the other hand, it is more economical to process the feeds in port areas and distribute the finished product. Accordingly, a larger proportion of feeds are commercially processed in grain-importing countries than in a grain-self-sufficient one, such as France.

The value of the grains used in feed manufacturing is only 20 to 25 percent that of the finished rations. The ration's value is in turn enhanced another 30 to 45 percent when the feeds are converted into livestock products.

The economic advantages of this value-added feature apply to all modern livestock feed operations—both on the farm and commercial—and should continue to expand French livestock feeding.

Soviet Sunflower Outlook Cloudy, Says Team

Continued from page 4

at Armavir, one of the country's largest, which has a capacity of 800 metric tons of sunflowerseed per day or nearly 255,000 tons a year. In 1972/73, this plant processed 23,000 tons of imported U.S. soybeans.

THE KRASNODAR plant, also visited by the team, recently expanded its capacity from 500 to 600 tons per day or to nearly 190,00 tons annually. Oil extraction equipment that was removed from Krasnodar was sent to a neighboring plant to increase its capacity. About 10,000 tons of U.S. soybeans were processed at the Krasnodar plant in 1972/73.

Other plants known to have processed U.S. soybeans are located in Labinsky, Krapotkin, Ustlabinsky, and Vinnitsa, as well as copra/flaxseed plants in the Baltic and Leningrad regions.

Aside from State processing facilities, up to 300,000 tons of sunflower oil are produced either by small, cold-press operations on collective farms or by custom milling arrangements at local facilities. In the latter case, oil and meal are returned to the collective farms at low prices.

Sunflower-processing involves drying, hull removal, cracking, and a pre-press operation, followed by solvent extraction to remove the remaining oil from the seed. About 75 percent of the sunflower oil is removed in the pre-press operation. The remainder is removed by extraction.

Pre-press sunflower oil production of 1,748,000 tons in 1974 includes an estimated 10 percent or 225,000 tons produced in State facilities not equipped with solvent extraction units. The team estimated that 1,523,000 tons or 75 percent of the oil in the sunflowerseed was removed in the pre-press operation before solvent extraction. The remaining 507,000 tons or about 25 percent was removed by solvent extraction.

In processing soybeans, however, Soviet sunflower capacity is sharply reduced. The Armavir plant, which processed about 254,000 tons of sunflower in 1974, could process only 140,000 tons of soybeans annually. Soybeans are dried, if necessary, then prepared and run through the pre-press operation, followed by extraction.

In soybean processing, about 75 percent of the oil is also removed in the expellers. The extracted cake contains less than 1 percent oil. However, since soybeans contain up to twice the cake of sunflowerseed and about one third the oil, the pre-press, extraction, and desolventing processes reduce the effective crushing capacity by nearly 50 percent.

Visits to refining and margarine facilities and subsequent discussions with oil research scientists at the All-Union Institute in Leningrad revealed Soviet practices that are sharply in contrast to established U.S. procedures. The bulk of the Soviet Union's edible oil supply, for example, is provided by pre-pressed oil and small quantities of cold-pressed oil produced on collective farms. Only in the Soviet Far East is solvent-extracted oil, that is, soybean oil, used for food products such as margarine. In the United States, virtually all edible vegetable oils are solvent extracted.

Oil quality for shelf-life—a major concern in U.S. margarine manufacture—appears to play only a minor role in the Soviet Union. U.S. processing techniques, plus the addition of 2 percent salt, permit a margarine shelf-life of 4 to 5 months at 5°-8°C.

In the Soviet Union, where little or no salt is used as a preservative but citric acid is permitted, a shelf-life of 4 weeks at 10°C is standard. Until raw material supplies increase materially, shelf-life will continue to be relatively less important than in the United States.

IN 1974, edible vegetable oil consumption in the USSR was 7.9 kilograms or about 17 pounds per capita, compared with the recommended Soviet nutritional goal of 9.1 kilograms, about 20 pounds per capita.

Soviet consumers can choose from 16 brands of margarine, all with an 82 percent fat basis. Package sizes include 200 and 250 grams. Margarine is made from hydrogenated fats, such liquid oils as sunflowerseed, cottonseed, soybean, peanut, and coconut, or from 100-percent cultured whole milk. Imported coconut oil and butter are used for the highest grades, and some tallow is used.

Solvent-extracted oil, which accounts for about a fourth of total sunflower oil production, is used for export and non-food products such as soap and paint, among many others.

The Soviet Union's requirements for industrial oils for both export and domestic use are increasing rapidly. Official data report 481,000 tons of sunflower oil exports in 1974, which the team estimates was mainly, if not entirely, solvent-extracted oil. A residual quantity of 26,000 tons of solvent-extracted oil is shown as having been used industrially during 1974.

Soviet exports of sunflower oil in 1975 are expected to be higher than in 1974, probably at about 500,000 to 525,000 tons. Exports in 1976 are likely to plunge, however, reflecting the sharply lower 1975 crop, and shipments may not exceed 350,000 to 400,000 tons.

In 1974, 570,000 tons of cottonseed and hardened sunflower oil were used for industrial purposes, primarily soap. Soap production was reported at 2,147,000 tons, on a 40 percent fat basis, indicating a utilization of 859,000 tons of vegetable oils, animal fats, and fatty acids.

WORLD WEATHER

Farmers in North America took advantage of abundant sunny and mild days in September and October, and rapidly wrapped up harvest of many crops. Areas of drought are more limited than usual and unlike last year, frosts have caused only minimal damage to crops.

The lingering dry area of the southwestern U.S. Great Plains may portend the trend of weather for the Great Plains next season.

Southern Brazil received heavy rains in September, but the rainy season in central Brazil, where moisture is badly needed, is off to a slow start.

Good rains fell in interior sections of Argentina in September, but much of the eastern region remained dry.

Europe, for the most part, has had the type of fall weather it needed—adequate rain interspersed with dry, sunny periods. The rains, generally well above normal, eased the summer-long drought in Western Europe, while the dry periods favored harvesting and fall soil preparations.

September and early October have been exceptionally mild in Eastern Europe and much of the USSR, with temperatures above normal. Mid-October saw the first widespread freezes of the season in European USSR and the

Continued on page 16

CROPS & MARKETS

GRAINS • FEEDS • PULSES • SEEDS

USSR Purchases Grain From Canada. The USSR has purchased another 500,000 tons of grain from Canada—300,000 tons of barley for delivery between November and January, 150,000 tons for wheat for delivery by July 1976, and 50,000 tons of oats for delivery by May 1976. This brings the Canadian-USSR grain trade total to 4.3 million tons for shipment in the 1975/76 year, 3.9 million tons of which is wheat.

Czech Grain Estimate Lowered. Czechoslovakia's 1975 grain production target of 10.3 million metric tons may not be achieved. The most pessimistic estimates now place production at only 9-9.3 million tons. A record grain crop of 10.6 million tons was harvested in 1974. The lower production estimate is attributed to hot, dry weather in the western part of the country, which produces about two-thirds of total grain output, and to rain and storms in eastern Czechoslovakia. Lack of harvesting machinery also may have contributed somewhat to lower output.

Rotterdam Grain Prices and Levies. Current offer prices for imported grain at Rotterdam, the Netherlands, compared with a week earlier and a year ago:

Item	Oct. 20	Change from previous week	A year ago
	Dol. pe bu.	*Cents per bu.*	*Dol. per bu.*
Wheat:			
Canadian No. 1 CWRS-13.5	6.01	− 1	(1)
USSR SKS-14	(1)	(1)	(1)
French Feed Milling [2]	3.55	+ 2	(1)
U.S. No. 2 Dark Northern Spring: 14 percent	5.23	− 8	6.50
U.S. No. 2 Hard Winter: 13.5 percent	5.13	+ 3	6.40
No. 3 Hard Amber Durum	6.36	−31	8.10
Argentine	(1)	(1)	(1)
U.S. No. 2 Soft Red Winter	4.20	−25	(1)
Feedgrains:			
U.S. No. 3 Yellow corn	3.32	− 8	4.20
French Maize [2]	3.41	− 4	(1)
Argentine Plate corn	3.81	0	4.31
U.S. No. 2 sorghum	3.24	−10	4.13
Argentine-Granifero sorghum	3.30	− 7	4.15
U.S. No. 3 Feed barley	3.36	− 9	(1)
Soybeans:			
Brazilian	5.96	−22	(1)
U.S. No. 2 Yellow	5.69	−28	10.29
EC import levies:			
Wheat	.65	+18	0
Corn	.64	+12	0
Sorghum	.67	+ 7	0

[1] Not quoted. [2] Basis c.i.f. west coast, England
NOTE: Price basis 30- to 60-day delivery

Australia, Egypt Sign Wheat Agreement. In a new 3-year wheat agreement covering 1976, 1977, and 1978, signed October 9, 1975, Australia agreed to provide Egypt with 1 million metric tons of wheat each year on terms to be negotiated annually. The first year's contract, which could be worth about $163 million, provides for various grades of wheat to be shipped during calendar 1976 with the usual 12-month credit terms. Apparently because of the high price of the 1975 contract—which also was for 1 million tons—the Australian Wheat Board (AWB) for the 1976 contract has agreed to a lower average price—$166.32—than the current AWB price for February/March 1976 shipment.

South Africa To Supply Corn To Taiwan. The South African Maize Board has signed an agreement with the Republic of China (Taiwan) for the sale of 1,350,000 tons of corn over a 3-year period beginning June 1, 1976. The agreement was signed during a visit to Pretoria of a 29-member trade mission from Taiwan and is to succeed a similar agreement, for 1.2 million tons, that runs from April 1973 to May 1976.

Dry Conditions in Some USSR Grain Areas. Dry conditions in the Lower Volga region and in the southern Ukraine are posing a threat to winter grains in those areas of the USSR. These areas were not visited by recent travelers in some of the more important winter grain areas where crop conditions were assessed as mostly good.

GENERAL

CCC Amends Export Credits. Two Commodity Credit Corporation lines of credit were amended in early October. A $12 million line of credit established in September for the Dominican Republic has been amended to delete rice from the line and to provide export financing of $2.4 million worth of dry edible beans and $3.6 million worth of soybean oil. The $6 million allocated for wheat remains unchanged. A $25 million line of credit for cotton in Taiwan was amended to increase the line by $3 million.

In a separate action, cottonseed oil was made eligible for CCC financing, effective October 8.

OILSEEDS • PRODUCTS

Canada's Oilseed Crop Estimates Lowered. Canada's oilseed production estimates, based on mid-September conditions, were lowered somewhat from estimates prepared a month ago. Rapeseed production is now expected to total 71.6 million bushels (1.62 million metric tons), about 3 percent less than indicated in September but 40 percent above the 1974 crop of 51.3 million bushels. An average yield of 17.8 bushels per acre is expected from the 4.02 million acres planted this year.

Flaxseed production, estimated at 17.1 million bushels, declined 4 percent from the earlier estimate, but should exceed by 24 percent last year's production of 13.8 million bushels. Yields per acre are expected to average 12.2 bushels from this year's area of 1.4 million acres.

Soybean production, estimated for the first time this year on October 3, should reach 12.1 million bushels—up 10 percent from the 1974 crop level of 11 million bushels. The

increase is anticipated, despite a reduction in area this year to 395,000 acres from 445,000 in 1974, because yields are expected to average 30 bushels per acre, compared with 24.8 bushels in 1974.

Peru's New Fishmeal Sales Policy. Peru recently introduced a new export sales policy for fishmeal requiring that the acceptance of all new export sales orders be subject to production. Exports against new sales orders will be delayed unless the fish catch reaches or exceeds 1 million tons for the month prior to scheduled shipment. With fishing activity restricted, catch prospects for October thus will be substantially reduced, limiting the acceptance of new export sales orders for forward shipments of fishmeal. Unconfirmed trade reports indicate that Peruvian anchovy fishing was resumed on a limited basis October 6 with 50 to 100 boats. Commercial fishing is expected to be resumed as soon as it can be determined that spawning has ended.

FAS forecasts the calendar 1975 Peruvian fish catch at 5 million metric tons, equivalent to 1.1 million tons of fishmeal and 325,000 tons of fish oil. The catch through mid-June totaled 2.95 million tons, from which 650,000 tons of fishmeal were produced.

FRUIT • NUTS • VEGETABLES

Canadian Potato Crop Revised Upward. Statistics Canada on October 3 placed the total Canadian potato crop at 43.5 million hundredweight (cwt), based on mid-September conditions. The revised estimate represents an increase of about 4.9 million cwt from the mid-August forecast, but an overall decrease of 11.3 million cwt from last year's crop.

The decline in production is attributed to a drop in cultivated area of 25.3 million acres from the preceding year as well as drought conditions that existed in some of the principal producing provinces. The lack of rainfall, however, does not appear to be as serious as first anticipated as evidenced by the rise in yield from the previous forecast. Production in 1974 and 1975, by province, (1,000 cwt): Prince Edward Island, 12,400, 8,510; Nova Scotia, 638, 568; New Brunswick, 13,398, 9,720; Quebec, 8,425, 7,054; Ontario, 8,592, 7,380; Manitoba, 4,900, 4,000; Saskatchewan, 380, 500; Alberta, 4,000, 3,250; British Columbia, 2,050, 2,500; total 54,783, 43,482.

COTTON

Some Mideast Cotton Crops To Decline. Reports from U.S. agricultural attachés in the major Eastern Mediterranean cotton-producing countries of Turkey, Iran, Syria, and Israel indicate that overall area planted to cotton in those countries last spring dropped about 20 percent. Good weather throughout the growing season, if continued through the harvest season, could mean higher yields in 1975/76 and an aggregate drop in 1975/76 production of 17 percent (800,000 bales) below last season's record 4.7 million bales in the four countries reporting.

Turkey will account for a little over 500,000 bales of the decline, reducing current production estimates in that country 20 percent below last season's 2.755 million. Iran also expects a 20 percent decline to about 830,000 bales; Syria looks for only a minor decline below the 1974/75 outturn of 665,000 bales; Israel anticipates no change in last season's outturn of 230,000 bales.

Current estimates place aggregate 1975/76 exports for the region up 30 percent from last season's estimated 1.8 million bales. Turkey forecasts an optimistic 565,000-bale rise above last season's unusually low shipments of 735,000. Much of the cotton from Syria and Iran has assured markets under bilateral trade agreements with Communist countries. Syria currently anticipates higher exports in 1975/76 of around 500,000 bales, but a smaller crop in Iran will likely cause exports to drop as much as 100,000 bales below last season's estimated 550,000. Israel hopes to maintain last season's shipments of 130,000 bales.

Smaller Northern Hemisphere Cotton Crop. Reports from U.S. agricultural attachés confirm predictions of a drop in 1975/76 raw cotton area now estimated to average around 11 percent in foreign non-Communist Northern Hemisphere countries.

The sharpest declines are in the high-technology, large exporting countries. Farmers in those countries, adversely affected last season by low cotton prices and higher production costs, have switched acreage to such crops as sugarbeets and grains. Despite the production declines, unusually large August 1 carryover stocks in most of those countries mean strong competition for the United States in currently depressed export markets.

Estimated production cuts range from an average of 5 percent (about 400,000 bales) in Egypt and Sudan combined to a precipitous 60 percent in Mexico, where the crop may drop below 1 million bales for the first time in 25 years. Other more moderate declines include nearly 200,000 bales (down 11 percent) in the Central American countries (where acreage is down 20 percent), and 800,000 bales (down 20 percent) in the important Mideast producing countries, including around 550,000 bales in Turkey.

World Cotton Demand To Rise Moderately. Recent reports point to a 5 percent or 2.7-million-bale increase in world cotton consumption in 1975/76 and a consequent moderate improvement in world trade. The recovery in world cotton consumption contrasts with that of last season, when sharply reduced textile demand pushed cotton use down by a little over 3 million bales to 58.1 million. The 1975/76 world consumption forecast of 60.8 million bales still will be below the 1973/74 boom level of 61.3 million bales and may not be achieved if any weakness develops in world economic recovery and revival of consumer demand.

Demand has already begun to pick up in the United States but is not expected to broaden until early 1976 in the Far East and perhaps not until late 1976 in western Europe.

World exports are forecast to rise about 1 million bales to 18 million. Foreign non-Communist exporting countries will account for all of the increase. Unusually large carryover stocks in those countries and currently uncompetitive U.S. export prices mean strong competition for U.S. cotton in foreign markets. U.S. exports are currently forecast at 3.5-4 million bales, compared with 3.9 last season.

U.S. Cotton Export Prices Higher. Domestic U.S. cotton prices continued to strengthen in September, while foreign asking prices remained almost unchanged. As a result, the previous spread in U.S. cotton export prices of 5-10 cents above foreign growths widened to a range of 7-13 cents per

pound for SM 1 1/16" descriptions and 3-13 cents per pound for coarse counts, c.i.f. Northern Europe. On September 25, California/Arizona DPL SM 1 1/16" averaged 67 cents per pound on that market, about 12 cents above the five comparable growths comprising Liverpool's Cotton Outlook "A" Index. Because of quiet trading on the Osaka market, late September prices were not quoted. However, the U.S. spread above foreign growths has recently been smaller on that market.

Very light foreign demand and concern over higher U.S. prices held new U.S. cotton sales in the first 3 weeks of September to only 65,000 bales. Foreign export sales also were reported slow.

Far East Takes More U.S. Cotton. U.S. raw cotton exports in August totaled 326,000 running bales, up 25 percent from the August 1974 total and the third largest August figure since 1966. This sharp rise in exports was attributed to shipments previously contracted for 1974/75 delivery. These sales were primarily to Far Eastern mills. Deliveries to Asian ports comprised 85 percent of exports for August. Deliveries to all other areas declined about 35 percent from those of August last year, emphasizing cotton's inactive world market. Cotton shipments to Europe were down 36 percent from those of August 1974, with a drop of 28 percent to European Community countries.

SUGAR • TROPICAL PRODUCTS

September Coffee Prices Steady. Green coffee prices moved within a narrow range during September, with Colommian Milds, Central American Milds, and African Robustas down slightly at the end of the month. The indicator price for Brazilian Santos 4's remained unchanged throughout September but it was strictly a nominal price, with virtually no sales being effected at that level.

Despite importer awareness that the 1976/77 harvest in Brazil will be extremely small because of the severe frost in July, purchases of green coffee in both Europe and the United States continued on a hand-to-mouth basis, reflecting both buyer confidence that ample supplies will be available around the world and the substantial amount of coffee currently in the hands of resellers who are prepared to undersell the producer countries at this time.

Imports of green coffee into the United States in August and September rose about 12 percent over the average of the first 7 months of 1975. However, imports for January-September were still the lowest since 1969.

Philippines Ships Sugar to Japan. For the 1974/75 (September-August) marketing year, Philippine sugar exports to Japan amounted to 591,150 short tons, commercial weight. Japan was the largest market for this period and exports to the United States (generally the importer of almost all Philippine sugar exports) amounted to 582,680 tons. Prior to 1974, the Philippines had shipped only small quantities of sugar to Japan.

Other exports for the marketing year were (in thousands of short tons): United Kingdom, 80; Iran, 45; Finland, 34; Morocco, 16; and People's Republic of China, 12. Total sugar exports amounted to 1,361,241 tons. It is estimated that the Philippines has contracted for shipment of about 500,000 short tons between September 1 and December 31, 1975.

TOBACCO

Philippine Tax Hits Tobacco Imports. U.S. flue-cured and burley tobacco exports to the Philippines (10.3 million pounds worth $12.6 million in 1974) could be seriously affected by a recent Philippine Presidential decree revising taxes on cigarettes.

The decree lowers taxes on cigarettes made from domestic tobacco but raises rates on imported and foreign brands made under license in the Philippines by 45 and 200 percent, respectively. The decree is intended to increase revenue, promote local brands, conserve dollar resources, and reduce to a minimum exchange remittances to foreign-brand owners having licensing agreements with Philippine cigarette manufacturers. Four leading U.S. cigarette manufacturers have licensing agreements with Philippine companies.

The higher taxes wil bear heavily on foreign brands made under license in the Philippines and on local brands containing high-quality imported leaf. The tax on these will be as high as 22 U.S. cents per pack, depending on retail price. Since the retail price of cigarettes, exclusive of tax, is largely indicative of the quality and cost of the tobacco contained, those brands containing the most U.S. tobacco will be hardest hit.

The disproportionately heavy tax on imported brands may not have much effect on legal imports—now virtually precluded by high duties and restrictive import licenses—but it may result in a resurgence of contrabrand imports.

The Philippine four-to-one mixing requirement, which formerly forced domestic use or export of all local cigarette tobacco, has been suspended, but the discriminatory impact of the new tax on cigarettes containing foreign leaf could effectively replace this nontariff measure and encourage increased domestic production.

Italy Amends Tobacco Franchise. Effective January 1, the Italian Tobacco Monopoly will lose its exclusive franchise to import and wholesale manufactured tobacco products, a move resulting from a Common Market regulation adopted in 1970 that also applies to the French Tobacco Monopoly. France is expected to implement the regulation prior to January 1.

The monopolies will retain exclusive rights to import raw leaf and to manufacture tobacco products. They also retain the authority to revoke retail distribution franchises. Thus, the risk of losing a lucrative franchise could discourage retail tobacconists from buying and displaying imported products. As a result, sales opportunities for imported U.S.-made and licensed European-made American brands probably will remain limited.

Japan Grows Burley in Brazil. Japan Tobacco Corporation (JTC) technicians working with Brazilian tobacco farmers have successfully completed a 2-year experiment in burley cigarette tobacco production in a region that heretofore has not grown cigarette leaf commercially. Under an agreement between JTC and São Paulo State, technicians have developed, from the U.S. variety Burley 21, an acceptable leaf that will be used for blending with U.S. tobacco in Japanese cigarettes. JTC hopes to produce some 10,000 metric tons of burley annually in São Paulo, all for export to Japan.

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

PENALTY FOR PRIVATE USE, $300
OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL

First Class

FA UNIVE300UB R 1
UNIVERSITY MICROFILMS
JOY REED SUPVR PERIODICALS
300 N ZEEB RD
ANN ARBOR MI 48106

Cattle Take to Air

Continued from page 8

plus improper or inadequate ventilation contributed to fatigue and some mortality on flights. Most of these problems have since been overcome—Holstein-Friesian Services has reported no fatalities during its record exports this year—but shipping conditions are still being tested and improved.

In addition to these developments, prices on airlines in the last few years have been generally competitive with those of other transportation methods—a big factor behind the rise in air shipments of cattle.

Because of the need for highly trained crews, large facilities to assemble and quarantine animals prior to export, and other special conditions, air shipments of live animals can only take place from Government-approved ports of embarkation. Currently, some 12 U.S. airports fall into the category of "approved ports of embarkation with holding facilities," while another 17 can be used under special arrangements.

In line with the growing air trade in live cattle and other animals, these export facilities are being steadily expanded and modernized, with more airports added to the approved list as they meet Government requirements.

Meanwhile, U.S. Government and industry leaders are working to establish environmental standards for air shipments of live animals—an area in which definite guidelines are still lacking, despite numerous improvements over the years in shipping conditions. Cooperating in this effort are three U.S. Department of Agriculture agencies—the Foreign Agricultural Service (FAS), the Animal and Plant Health Inspection Service (APHIS), and Agricultural Research Service (ARS).

As part of this program, researchers are looking into conditions of handling and loading facilities, the air transport equipment used, including temperature control and air ventilation systems, comfort of the animals during flight, and unloading procedures and handling facilities at destinations.

In some cases, ARS scientists actually accompany shipments of animals or will accompany them to monitor how they hold up under certain conditions, such as unusually warm weather, moving from an extremely cold climate to a very warm one or vice versa, double-decking of cargo area to allow increased space for shipment of small animals, and when new types of pens or containers are used. Followup observations are made of animals after 2 or 3 days at their destination.

These efforts—and resulting guidelines—should make it easier for air carriers to develop additional air-transport equipment in line with what appears to be a steadily expanding foreign market for live animals shipped by air.

—By Beverly J. Horsley

World Weather

Continued from page 12

first subzero readings in Siberia.

Rainfall in Eastern Europe has been sparse. Some precipitation, including the first major snowfalls of the season, was reported in mid-October.

Soil moisture remains critically low in much of the USSR. Soils will be freezing in a few weeks, so there is little time for improvement before next spring.

Dry weather in northeastern parts of the People's Republic of China (PRC) and adjacent Hopeh Province has been beneficial for harvesting, but soil moisture is well below normal.

Grains. Northern Hemisphere harvests have proceeded under mostly favorable conditions. Frosts have caused little damage. Though there have been wet weather delays, particularly in the Canadian prairies, northern United States, and parts of the PRC, these have been followed by extended dry periods.

There are no serious lags in planting winter grains although low soil moisture is a problem in much of the USSR, Poland, and East Germany, the western portion of the U.S. winter wheat region, and the PRC's Hopeh Province.

Soil moisture or water storage is exceptionally good, on the other hand, in Pakistan, India, and most of the PRC's winter wheat region. Moisture is also improved in Western Europe.

In the Southern Hemisphere, Australia continued to have the timely rains that have virtually assured good production of winter grains. These rains have also provided a good starting point for summer cereals.

The same is true for southern Brazil. Plantings have progressed slowly in central Brazil due to the late arrival of fall rains.

Rainfall has been insufficient for good growth and development of winter wheat in much of Argentina, though Argentina's corn belt received much needed rain in September.

Oilseeds. Weather has been generally favorable for harvest of oilseeds throughout the Northern Hemisphere, though heavy rains have delayed progress in parts of the southern United States. Dry soil has held up planting of soybeans in central Brazil. The long, active monsoon rains have enhanced peanut prospects in India and West Africa.

Forage. Early fall rains improved forage prospects in Western Europe, though some Mediterranean areas remain dry. Eastern Europe has tended to be dry with little apparent harm to Yugoslavia, Hungry, and Romania, where summer rainfall was generous.

Other crops. Weather has been mostly favorable in sugarcane areas, except for the droughts of central Brazil and the southern Caribbean. It has been an almost ideal fall in sugarbeet regions.

—By William J. Cremins, FAS

*U.S. GOVERNMENT PRINTING OFFICE:1975 211-407/15 1-3